

No.

200200119



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**D&H Technology Holding Company LLC**

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC FURNISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE APPLICANT(S) TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'PM 2344 BG/RR'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of September, in the year two thousand and five.*

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>Company,</b> <b>D&amp;PL Technology Holding Corp. LLC</b> <b>AAA 30 Sept 2006</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>PMX 413340BR</b> <b>DPX 99V05BR</b>		3. VARIETY NAME <b>PM 2344 BG/RR</b>	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country ) <b>PO Box 157</b> <b>100 Main Street</b> <b>Scott, Mississippi 38772</b> <b>USA</b>		5. TELEPHONE (include area code) <b>(662) 742-4141</b>		PVPO NUMBER <b>200200119</b>	
		6. FAX (include area code) <b>(662) 742-3182</b>		FILING DATE <b>3/20/2002</b>	
7. IF THE OWNER IS NOT A "PERSON" GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>		8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Delaware</b>		9. DATE OF INCORPORATION <b>February 29, 1996</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Delta and Pine Land Company</b> <b>Kelly Casavechia</b> <b>P.O. Box 157</b> <b>Scott, MS 38772</b>				FILING AND EXAMINATION FEE: <b>\$ 2705</b> DATE <b>3/20/2002</b> CERTIFICATION FEE: <b>\$ 682.00</b> DATE <b>8/8/05</b>	
11. TELEPHONE (include area code) <b>(662) 742-4141</b>		12. FAX (include area code) <b>(662) 742-3182</b>		13. E_MAIL <b>kelly.h.casavechia@deltaandpine.com</b>	
14. CROP KIND (Common Name) <b>Cotton</b>					
15. GENUS AND SPECIES NAME OF CROP <b>Gossypium hirsutum</b>		16. FAMILY NAME (Botanical) <b>Malvaceae</b>		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse). a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)			19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22)		
			20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO		
			21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)			23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER <b>Richard H. Sheetz</b>			SIGNATURE OF OWNER <b>William V. Hugie</b>		
NAME (Please print or type) <b>Dr. Richard H. Sheetz</b>			NAME (Please print or type) <b>William V. Hugie</b>		
CAPACITY OR TITLE <b>Senior Cotton Breeder</b>		DATE <b>2/26/02</b>		CAPACITY OR TITLE <b>Vice President/Director of Research</b>	
				DATE <b>3/12/02</b>	

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

#### ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:  
(1) Identify these varieties and state all differences objectively;  
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

USA - January 25, 2002

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Bollgard® with Roundup Ready® cotton

THESE SEEDS ARE COVERED UNDER U. S. PATENTS 5,633,435; 5,500,365; 5,424,200; 5,359,142; 5,352,605; 5,530,196; 5,322,938; 5,196,525; 5,188,642; 5,164,316; 4,940,835; 5,717,084; 5,728,925; and 5,804,425.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed/lr-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.

**PVP APPLICATION: PM 2344 BG/RR**

**EXHIBIT: A**  
**(AMMENDED 2/4/04)**

**ORIGIN AND BREEDING HISTORY**

PM 2344 BG/RR was developed by the backcrossing breeding method. The donor parent was a plant of the cotton variety PM 2326 BG/RR containing the transgenic insertions 1445 and 531. Insertion 1445 was developed by the MONSANTO COMPANY using Recombinant DNA techniques to introduce a resistant version of the gene EPSPS which encodes the enzyme: 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS). This modified EPSPS was originally isolated from the common soil borne microorganism *Agrobacterium sp.* strain CP4 and confers to plants containing insertion 1445 resistance or tolerance to the herbicide glyphosate [formulation of glyphosate, N (phosphonomethyl) glycine] commercialized under the trade name ROUNDUP. The insertion 531 of construct PV-GHBK04 of *Bacillus thuringiensis* var. *kurstaki*, developed by the MONSANTO COMPANY, causes in cotton plants the production of a pesticide protein conferring degrees of tolerance to various lepidopteran insects.

The recurrent parent was a Paymaster Experimental line designated variously as PMX 413340 or DPX99V05. Backcrossing was conducted to the BC3F2 generation in Delta & Pine Land Company greenhouse facilities at Lubbock, Texas and Scott, Mississippi. In 1998, multiple lines derived from this backcross program were grown at Scott, MS. Of these, 5 lines were selected based on homozygosity for the Roundup Ready and Bollgard genes for further agronomic testing. In 1999 these 5 lines were tested in replicated field tests at 5 locations in Texas. Based on these tests, 2 lines (246 and 292) were selected for trueness to the original recurrent parent plant type, fiber traits, lint yield, and lint yield consistency, stormproofness and maturity. The selected 2 lines were then combined to constitute the experimental PMX413340BR or DPX99V05BR. During the growing seasons of 2000 and 2001, this experimental has been extensively tested at multiple locations while it has also been increased for commercial release. During the testing period PM 2344 BG/RR has been observed to be uniform and stable in all the characteristics measured.

The recurrent parent PMX413340 originated in a fiber improvement reselection program within the Paymaster variety HS26. In 1990, 30 selections were made in a Foundation seed increase of Paymaster HS 26. Based on fiber quality and agronomic properties, selection # 02 was selected at Inadale, Texas in 1991 for further testing. At that time it was assigned the experimental designation PMX413340 and was tested under this designation. In subsequent years the line has also been referred to as DPX99V05.

PM 2344 BG/RR has been observed to be stable in its characteristics in successive sexual generations with no variants being noted.

**PVP APPLICATION: PM 2344 BG/RR**

**EXHIBIT: B**

**NOVELTY STATEMENT**

PM 2344 BG/RR is most similar to PM 2326 BG/RR. PM 2344 BG/RR, however, is different and novel in that it has **longer Fiber Length** (1.074 inches versus 1.048 inches), **shorter Plant Height** (27.99 inches versus 31.46 inches) and produces bolls, which are **less Stormproof** (3.15 versus 3.35) than those of PM 2326 BG/RR.

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## EXHIBIT B

## PLANT HEIGHT DATA COMPARISONS AND STATISTICAL ANALYSIS

( PAGE 1 OF 2 )

FOR PM 2344BG/RR VERSUS PM 2326BG/RR

(PLANT HEIGHT DATA IS IN INCHES)

ENVIRONMENT #	YEAR	TEST	LOCATION	PM2344BG/RR PLANT HEIGHT	PM2326BG/RR PLANT HEIGHT	DIFFERENCE
1	2000	AHP401	FINNEY	20.0	26.4	-6.4
2	2000	AHP401	ROOSEVELT	26.7	28.3	-1.6
3	2000	AHP401	HALE CENTER	27.3	28.7	-1.4
4	2000	AHP401	BAKER	26.7	31.7	-5.0
5	2000	AHP401	KLONDIKE	33.3	37.0	-3.7
6	2000	AHP401	SEAGRAVES	18.7	20.3	-1.6
7	2000	AHP401	HLE. CTR. DRY	18.0	21.0	-3.0
8	2000	RPTRG	HASKELL DRY	25.3	30.0	-4.7
9	2000	RPTRG	ALTUS	29.0	32.7	-3.7
10	2000	RPTRG	INADALE	18.3	20.3	-2.0
11	2000	RPTRG	SAN ANGELO	24.7	34.3	-9.6
12	2001	AHP301	ROOSEVELT	22.0	27.0	-5.0
13	2001	AHP301	HALE CENTER	34.3	37.0	-2.7
14	2001	AHP301	STANTON	26.7	28.3	-1.6
15	2001	AHP301	HLE. CTR. DRY	14.3	14.7	-0.4
16	2001	AHP401	FINNEY	22.0	23.7	-1.7
17	2001	AHP401	ROOSEVELT	19.3	23.3	-4.0
18	2001	AHP401	HALE CENTER	34.0	37.3	-3.3
19	2001	AHP401	DENVER CITY	23.7	24.7	-1.0
20	2001	AHP401	STANTON	27.3	25.3	2.0
21	2001	AHP401	HLE. CTR. DRY	15.5	15.0	0.5
22	2001	RP3BG	HASKELL DRY	34.3	37.0	-2.7
23	2001	RP3BG	HASKELL DRY	38.3	42.7	-4.4
24	2001	RP3BG	ALTUS	29.0	36.3	-7.3
25	2001	RP3BG	MUNDAY	43.7	50.0	-6.3
26	2001	RPSTG4	HASKELL DRY	34.0	37.5	-3.5
27	2001	RPSTG4	HASKELL DRY	36.5	46.0	-9.5
28	2001	RPSTG4	ALTUS	40.5	42.5	-2.0
29	2001	RPSTG4	MUNDAY	43.0	49.8	-6.8
30	2001	RPSTG3	HASKELL DRY	33.3	35.0	-1.7
AVERAGES (N=30)				27.99	31.46	-3.47

## EXHIBIT B

PLANT HEIGHT DATA COMPARISONS AND STATISTICAL ANALYSIS  
( PAGE 2 OF 2 )

FOR PM 2344BG/RR VERSUS PM 2326BG/RR

(PLANT HEIGHT DATA IS IN INCHES)

STATISTICAL ANALYSIS 1/

"t" -Test: PAIRED TWO SAMPLE FOR MEANS

	PLANT HEIGHT PM2344BG/RR	PLANT HEIGHT PM2326BG/RR
MEAN	27.99	31.46
VARIANCE	65.32989655	87.72386207
OBSERVATIONS	30	30
HYPOTHESIZED MEAN DIFF.	0	
DF	29	
CALCULATED "t" STATISTIC	-7.03371181 **	
CRITICAL "t" AT 1 % PROB. LEVEL	2.756387403	

\*\* Indicates statistical significance at the 1 % level of probability.

1/ Data analyzed as paired observations. See Steel, R.D.G., and Torrie, J.H., Principles and Procedures of Statistics. McGraw-Hill Co., Inc., New York. 1960. Pages 78-79

PVP APPLICATION: PM 2344 BG/RR

EXHIBIT: B

NOVELTY STATEMENT  
(RESPONSE OF 2/4/04)

Exhibit B:

As the Office objections regarding the claimed distinctness of PM 2344 BG/RR versus PM 2326 BG/RR for **Fiber Length** are understood, there is a question about the presence within the submitted data set of individual paired observations in which the differences for the trait claimed are either zero or, actually slightly in the opposite direction of the claimed difference. The supporting Table as originally submitted includes a detailed statistical analysis of the data using the widely accepted 'Paired "T" Test'. The validity of this test is contingent on the magnitude of the computed "T" statistic across the entire data set and does not depend on whether each and every individual paired measurement shows a given difference. It is not uncommon in the assessment of a biological quantitative trait such as **Fiber Length** to find this type of deviation. Most quantitative traits have a fairly large environmental component to the observed variation. This environmental component can, and very often does, confound individual measures. This is why multiple measurements over a range of conditions are performed and a statistical measure of significance such as a "T" test applied in the first place.

The **Fiber Length** difference was found to have a calculated "t" value well in excess of the "critical value" required at the 1% level of probability. In other words the difference in **Fiber Length** is "**Highly Significant**" and distinctness for the trait has been established.

The "Paired T test" data presented were the result of comparing both varieties for **Fiber Length** across 39 environments during 2 years of testing. An additional table was attached to the original Application which summarizes the results of calculating the "t" statistic on the paired comparisons for the trait. In the table the "null hypothesis" for the test is that the mean difference is equal to zero. That is, that the two samples (of size 39 for **Fiber Length**) come from the same population (i.e.: are the same variety). The computed "t" statistics for the data set is: 6.825784684 with 38 degrees of freedom for **Fiber Length**. The critical value for "t" at the 99 % confidence level is 2.712. This is to say that less than 1 time in 100 would one expect a computed "t" value on paired samples of this size to be 2.712 or larger simply by chance variation in sampling. The "null hypothesis" must therefore be rejected. The samples come (with a greater than 99 % confidence level) from different populations. In reality the probabilities, of equal or larger "t" values in our data set is: 0.0000000424 for **Fiber Length**. Obviously the populations are "statistically different".



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## EXHIBIT B

## FIBER LENGTH DATA COMPARISONS AND STATISTICAL ANALYSIS

( PAGE 1 OF 2 )

FOR PM 2344 BG/RR VERSUS PM 2326 BG/RR

(FIBER LENGTH DATA IS IN INCHES)

ENVIRONMENT #	YEAR	TEST	LOCATION	PM2344BG/RR FBR LENGTH	PM2326BG/RR FBR LENGTH	DIFFERENCE
1	2000	AHP401	FINNEY	1.010	1.040	-0.030
2	2000	AHP401	ROOSEVELT	1.110	1.060	0.050
3	2000	AHP401	HALE CENTER	1.070	1.040	0.030
4	2000	AHP401	BAKER	1.040	0.990	0.050
5	2000	AHP401	KLONDIKE	1.090	1.070	0.020
6	2000	AHP401	SEAGRAVES	1.070	1.070	0.000
7	2000	AHP401	HLE. CTR. DRY	1.030	1.020	0.010
8	2000	RPTRG	HASKELL DRY	1.063	1.067	-0.004
9	2000	RPTRG	ALTUS	1.130	1.077	0.053
10	2000	RPTRG	INADALE	1.003	0.982	0.021
11	2000	RPTRG	SAN ANGELO	1.060	1.063	-0.003
12	2001	AHP201	ROOSEVELT	1.060	1.050	0.010
13	2001	AHP201	HALE CENTER	1.160	1.100	0.060
14	2001	AHP201	BAKER	0.980	0.910	0.070
15	2001	AHP201	DENVER CITY	1.070	1.080	-0.010
16	2001	AHP202	HALE CENTER	1.120	1.100	0.020
17	2001	AHP202	BAKER	0.970	0.940	0.030
18	2001	AHP202	DENVER CITY	1.090	1.050	0.040
19	2001	AHP301	ROOSEVELT	1.070	1.030	0.040
20	2001	AHP301	HALE CENTER	1.140	1.120	0.020
21	2001	AHP301	BAKER	0.960	0.970	-0.010
22	2001	AHP301	STANTON	1.060	1.010	0.050
23	2001	AHP301	HLE. CTR. DRY	1.070	1.030	0.040
24	2001	AHP401	FINNEY	1.050	1.030	0.020
25	2001	AHP401	ROOSEVELT	1.080	1.030	0.050
26	2001	AHP401	HALE CENTER	1.140	1.110	0.030
27	2001	AHP401	BAKER	0.910	0.900	0.010
28	2001	AHP401	DENVER CITY	1.090	1.040	0.050
29	2001	AHP401	STANTON	1.040	0.990	0.050
30	2001	AHP401	HLE. CTR. DRY	1.090	1.050	0.040
31	2001	RP3BG	HASKELL DRY	1.100	1.090	0.010
32	2001	RP3BG	HASKELL DRY	1.065	1.030	0.035
33	2001	RP3BG	ALTUS	1.110	1.135	-0.025
34	2001	RP3BG	MUNDAY	1.170	1.130	0.040
35	2001	RPSTG4	HASKELL DRY	1.155	1.120	0.035
36	2001	RPSTG4	HASKELL DRY	1.080	1.060	0.020
37	2001	RPSTG4	ALTUS	1.160	1.120	0.040
38	2001	RPSTG4	MUNDAY	1.130	1.110	0.020
39	2001	RPSTG3	HASKELL DRY	1.075	1.060	0.015
AVERAGES (N=39)				1.074	1.048	0.026

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## EXHIBIT B

FIBER LENGTH DATA COMPARISONS AND STATISTICAL ANALYSIS  
( PAGE 2 OF 2 )

FOR PM 2344 BG/RR VERSUS PM 2326 BG/RR

(FIBER LENGTH DATA IS IN INCHES)

STATISTICAL ANALYSIS 1/

"t" -Test: PAIRED TWO SAMPLE FOR MEANS

	FBR LENGTH PM2344BG/RR	FBR LENGTH PM2326BG/RR
MEAN	1.073615385	1.048051282
VARIANCE	0.003326401	0.003220734
OBSERVATIONS	39	39
HYPOTHESIZED MEAN DIFF.	0	
DF	38	
CALCULATED "t" STATISTIC	6.825784684 **	
CRITICAL "t" AT 1 % PROB. LEVEL	2.711567504	

\*\* Indicates statistical significance at the 1 % level of probability.

1/ Data analyzed as paired observations. See Steel, R.D.G., and Torrie, J.H., Principles and Procedures of Statistics. McGraw-Hill Co., Inc., New York. 1960. Pages 78-79

## EXHIBIT B

**STORMPROOFNESS DATA COMPARISONS AND STATISTICAL ANALYSIS**  
**( PAGE 1 OF 2 )**  
**FOR PM 2344BG/RR VERSUS PM 2326BG/RR**

ENVIRONMENT #	YEAR	TEST	LOCATION	PM2344BG/RR STORM- PROOFNESS	PM2326BG/RR STORM- PROOFNESS	DIFFERENCE
1	2000	AHP401	FINNEY	3.70	3.30	0.40
2	2000	AHP401	ROOSEVELT	3.30	3.30	0.00
3	2000	AHP401	HALE CENTER	3.00	3.30	-0.30
4	2000	AHP401	BAKER	3.00	3.30	-0.30
5	2000	AHP401	KLONDIKE	2.70	3.00	-0.30
6	2000	AHP401	SEAGRAVES	3.00	3.70	-0.70
7	2000	AHP401	HLE. CTR. DRY	3.30	3.30	0.00
8	2001	AHP201	ROOSEVELT	3.30	3.70	-0.40
9	2001	AHP201	HALE CENTER	3.30	3.30	0.00
10	2001	AHP201	DENVER CITY	3.00	3.30	-0.30
11	2001	AHP202	HALE CENTER	3.00	3.30	-0.30
12	2001	AHP202	DENVER CITY	2.70	3.00	-0.30
13	2001	AHP301	ROOSEVELT	3.30	3.30	0.00
14	2001	AHP301	HALE CENTER	3.30	3.30	0.00
15	2001	AHP301	STANTON	3.30	3.70	-0.40
16	2001	AHP301	HLE. CTR. DRY	3.00	3.30	-0.30
17	2001	AHP401	FINNEY	3.30	3.70	-0.40
18	2001	AHP401	ROOSEVELT	3.30	3.00	0.30
19	2001	AHP401	HALE CENTER	3.30	3.70	-0.40
20	2001	AHP401	DENVER CITY	3.30	3.70	-0.40
21	2001	AHP401	STANTON	3.00	3.30	-0.30
22	2001	AHP401	HLE. CTR. DRY	3.00	3.00	0.00
<b>AVERAGES (N=22)</b>				<b>3.15</b>	<b>3.35</b>	<b>-0.20</b>

## EXHIBIT B

**STORMPROOFNESS DATA COMPARISONS AND STATISTICAL ANALYSIS**  
**( PAGE 2 OF 2 )**  
**FOR PM 2344BG/RR VERSUS PM 2326BG/RR**

## STATISTICAL ANALYSIS 1/

**"t" -Test: PAIRED TWO SAMPLE FOR MEANS**

	<b>STORM- PROOFNESS PM2344BG/RR</b>	<b>STORM- PROOFNESS PM2326BG/RR</b>
MEAN	3.154545455	3.354545455
VARIANCE	0.054025974	0.05974026
OBSERVATIONS	22	22
HYPOTHESIZED MEAN DIFF.	0	
DF	21	
CALCULATED "t" STATISTIC	-3.659413115 **	
CRITICAL "t" AT 1 % PROB. LEVEL	2.831366146	

\*\* Indicates statistical significance at the 1 % level of probability.

1/ Data analyzed as paired observations. See Steel, R.D.G., and Torrie, J.H., Principles and Procedures of Statistics. McGraw-Hill Co., Inc., New York. 1960. Pages 78-79

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**EXHIBIT C**  
**(COTTON)**

## 3. GENERAL: (continued)

200200119

**Growth:**Determinate, Intermediate,  
IndeterminateIntermediateIntermediate**Leaf Color:**Greenish yellow, Light green,  
Medium green, Dark greenDark GreenDark Green**Boll Shape:** Length less than width,

Length equal to width,

Length more than width

Length greater  
than widthLength greater  
than width**Boll Breadth:** Broadest at base,  
Broadest at middleBroadest  
at baseBroadest  
at middle**\*4. MATURITY:** (50 % Open bolls; Preferred method; Describe method if different method was used.)

Date of 50 % open bolls

26.024.6

Approx % of open bolls Oct 15

**5. PLANT:****Cm to 1st Fruiting Branch:**

(from cotyledonary node)

17.511.7**No. of Nodes to 1st Fruiting Branch:**

(excluding cotyledonary node)

5.45.9**Mature Plant Height cm:**

(from cotyledonary node to terminal)

71.0979.91**\*6. LEAF:** Upper most, fully expanded leaf.**Type:** Normal, Sub Okra,

Okra, Super Okra

NormalNormal**Pubescence:** Absent, Sparse,Medium, Dense **OR** Trichomes/cm<sup>2</sup>

(Bottom surface excluding veins)

MediumSparse**Nectaries:** Present or AbsentPresentPresent**\*7. STEM PUBESCENCE:**

Glabrous, Intermediate, Hairy

Hairy

Mixed: 85% H

15% G**\*8. GLANDS:** (Gossypol) Absent, Sparse, Normal, More Than Normal**Leaf:**NormalNormal**Stem:**NormalNormal**Calyx Lobe:** (normal is absent)AbsentAbsent**\*9. FLOWER:****Petals:** Cream, YellowCreamCream61% Cream**Pollen:** Cream, YellowCream39% Yellow**Petal Spot:** Present, AbsentAbsentAbsent

\*10. SEED:

200200119

**Seed Index:**

(g/100 seed, fuzzy basis)      13.55      10.98      \_\_\_\_\_

**Lint Index:**

(g lint/100 seeds)      7.56      7.03      \_\_\_\_\_

\*11. BOLL:

**Lint Percent:**

X Picked      \_\_\_\_\_ Pulled      35.73%      38.95%      \_\_\_\_\_

OR      \* Stripper Harvester equipped with Burr Extraction device.

**Gin Turnout:**

\_\_\_\_\_ Picked      X Stripped      35.1      35.7      \_\_\_\_\_

Number of Seeds per Boll      30.97      32.31      \_\_\_\_\_

Grams Seed Cotton per Boll      6.56      5.85      \_\_\_\_\_

Number of Locules per Boll      4.66      4.73      \_\_\_\_\_

**Boll Type:**

(Stormproof, Storm Resistant, Open)      Stormproof      Stormproof      \_\_\_\_\_

12. FIBER PROPERTIES:

Specify Method (HVI or other):      HVI      HVI      \_\_\_\_\_

\* Length: (inches, 2.5% SL)      1.074      1.048      \_\_\_\_\_

\* Uniformity: ( % )      83      83      \_\_\_\_\_

\* Strength, T1 (g/tex)      28.8      28.6      \_\_\_\_\_

\* Elongation, E1 ( % )      7.4      8.1      \_\_\_\_\_

\* Micronaire:      4.6      4.5      \_\_\_\_\_

Fineness (Source \_\_\_\_\_)      ----      ----      \_\_\_\_\_

Yarn Tenacity: (cN/tex, 27 tex)      ----      ----      \_\_\_\_\_

Yarn Strength: (lbs. 22's)      ----      ----      \_\_\_\_\_

13. DISEASES: (NT = Not Tested, S = Susceptible, MS = Moderately Susceptible, MR = Moderately Resistant, R = Resistant)

NT *Alternaria macrospora*

MR Fusarium Wilt

NT Anthracnose

NT Phymatotrichum Root Rot

NT Ascochyta Blight

NT *Pythium* (specify species)

NT Bacterial Blight (Race 1)

NT *Rhizoctonia solani*

NT Bacterial Blight (Race 2)

NT Southwestern Cotton Rust

NT Bacterial Blight (Race \_\_\_\_\_)

NT *Thielaviopsis basicola*

13. DISEASES : (continued)

200200119

☐ NT ☐ Diplodia Boll Rot

☐ MR ☐ Verticillium Wilt

☐ NT ☐ Other (specify) \_\_\_\_\_

14. NEMATODES, INSECTS AND PESTS: (NT = Not Tested, S = Susceptible, MS = Moderately Susceptible, MR = Moderately Resistant, R = Resistant)

☐ NT ☐ Root-Knot Nematode

☐ NT ☐ Reniform Nematode

☐ NT ☐ Boll Weevil

☐ NT ☐ Grasshopper (specify species): \_\_\_\_\_

☐ MR ☐ Bollworm

☐ NT ☐ Lygus (specify species): \_\_\_\_\_

☐ NT ☐ Cotton Aphid

☐ R ☐ Pink Bollworm

☐ NT ☐ Cotton Fleahopper

☐ NT ☐ Spider Mite (specify species): \_\_\_\_\_

☐ R ☐ Cotton Leafworm

☐ NT ☐ Stink Bug (specify species): \_\_\_\_\_

☐ NT ☐ Cutworm (specify species): \_\_\_\_\_

☐ NT ☐ Thrips (specify species): \_\_\_\_\_

☐ NT ☐ Fall Armyworm

☐ R ☐ Tobacco Bud Worm

☐ Other (specify): \_\_\_\_\_

15. COMMENTS: Present any additional information that cannot adequately be described in 1 through 13 which significantly distinguishes your variety.



**EXHIBIT D**

**ADDITIONAL DESCRIPTION OF THE VARIETY**

200200119

PAYMASTER COTTONSEED RESEARCH  
MULTIPLE LOCATION RANKINGS FOR LINT YIELD  
YEAR: 1999 EXPERIMENT: 101

VARIETY OR STRAIN	AVG YLD	AVG RNK	LOC: 1		LOC: 5		LOC: 11		LOC: 16		LOC: 22		FIBER TRAITS			PL. HT. IN.	STR RES 0-5	EAR -LY 0-99	VERT WLT 0-99
			YLD	RK	YLD	RK	MUNDAY	YLD	RK	HCT DRY	YLD	RK	LEN	STR	MIC				
PM330 BR (99V04BR)	1244	1	1294	1	908	2	1548	2	700	6	1772	1	1.017	26.4	4.5	31.2	3.5	23	15
PMX105996 BR-177 (99V02BR)	1187	2	1192	4	877	3	1573	1	685	7	1607	5	1.062	30.4	4.3	29.0	2.4	23	19
PAYMASTER H-1218 BGRR	1165	3	944	11	981	1	1466	3	736	2	1697	4	1.032	24.9	5.0	30.9	1.7	24	17
PM2344BG/RR (X413340BR, 99V05BR)	1136	4	1225	2	846	5	1453	5	673	8	1482	7	1.046	28.6	4.6	29.6	3.1	23	18
PAYMASTER PM 330	1129	5	1192	3	743	8	1244	10	731	3	1736	2	1.010	27.4	4.8	31.1	3.3	16	13
PM183 R-281 (99V03R)	1106	6	1121	6	830	6	1407	6	744	1	1428	8	1.058	27.8	4.2	32.2	2.6	20	15
PAYMASTER PM 330	1075	7	1072	8	859	4	1203	11	719	4	1520	6	1.010	27.0	4.7	30.4	3.5	11	11
SUREGROW 747	1060	8	1049	9	524	12	1465	4	554	10	1709	3	1.056	26.1	4.6	29.7	2.1	10	10
PMX105996	1035	9	997	10	786	7	1266	9	703	5	1420	9	0.986	27.7	4.8	27.0	3.0	29	22
PAYMASTER PM 2330 RR	1015	10	1076	7	691	9	1310	7	621	9	1376	11	1.002	28.0	4.2	30.5	3.1	26	14
PMX413340	968	11	1126	5	633	10	1268	8	515	11	1297	12	1.078	29.9	4.8	30.8	3.0	13	13
PAYMASTER PM 183	908	12	864	12	609	11	1176	12	505	12	1385	10	0.932	25.6	5.1	27.2	4.2	22	20
TESTS IN AVERAGES	5		1		1		1		1		1		5	5	5	5	3	3	3
AVERAGE YIELD	1086		1096		774		1365		657		1536		1.024	27.5	4.6	30.0	3.0	20	16
R-SQUARED	0.92		0.589		0.72		0.543		0.7099		0.83								
C.V.(%)	11.0		11.9		10.0		11.25		10.0		9.43								
L.S.D.(10%)	54		136.4		84		160		69		131.4								

\*STORM RESISTANCE: SCALE 0-5 WITH 5 MOST RESISTANT.

\*\*VERTICILLIUM WILT SUSCEPTIBILITY: SCALE 0-99 WITH 99 MOST SUSCEPTIBLE.

\*\*\*EARLINESS: SCALE 0-99 WITH 99 EARLIEST.

# DELTA & PINE LAND HIGH PLAINS COTTON RESEARCH YIELD TEST RESULTS

YEAR: 2000

EXPERIMENT: AHP 401 LOCATION NUMBER: 1,3,5,7,8,9,16

LOCATION NAME: FINNEY (NO YLD), RSEVLT, HLE CTR, KLNDIKE, BAKER (NO YLD), SEAGRAVES, HLE CTR DRY

C.V.: 8.1 % R-SQUARED: 0.98 L.S.D.(10%): 42 LBS

ENT NO.	VARIETY OR STRAIN	YLD LB/ AC.	RNK	LINT	FIBER PROPERTIES						PL. HT. IN.	VIS UAL 0-9	STR RES 0-5	EAR- LY 0-99	VERT WLT 0-99		
					LEN IN.	STREN G/TEX	MIC	MAT %	FINE MLTX	UR ELG							
1	PAYMASTER PM 183	874	53	32.1	0.981	26.6	4.5				81	6.3	23.2	5.7	4.1	31.4	22.9
2	PAYMASTER PM 280	945	50	31.5	1.089	29.8	4.1				82	6.4	25.4	5.6	3.1	25.9	25.0
3	PAYMASTER PM 2326 RR	1127	26	33.5	1.054	28.9	4.3				83	6.8	26.8	6.4	3.4	26.0	25.4
4	PAYMASTER PM 2200 RR	1081	35	33.0	1.059	28.1	4.2				82	6.5	26.7	5.6	3.2	24.2	23.3
5	DELTAPINE DP 2379	1126	28	33.4	1.041	27.8	4.7				83	7.2	25.7	6.4	3.1	21.3	17.5
6	SUREGROW 747	1178	19	34.7	1.079	26.0	4.4				82	7.2	24.9	6.5	2.0	19.1	12.1
7	DP 8C09 [=DPX565]	967	48	33.5	1.093	28.4	3.9				82	6.3	27.7	6.1	1.9	14.1	9.2
8	STONEVILLE TEXAS 239	1056	40	33.9	1.047	27.3	4.2				82	6.5	24.8	6.1	2.6	19.8	12.9
9	P5490 X 347*355 X P404 126661	1127	27	32.0	1.043	27.4	4.0				82	7.5	24.3	6.4	3.3	24.4	15.8
10	P107872 X 466*303 126514	1266	7	35.2	1.004	27.3	4.6				82	6.2	24.1	7.1	3.0	32.1	22.9
11	HS5C3 138223 1511583	1165	21	33.0	0.997	29.1	4.5				82	6.2	26.0	6.2	3.6	28.5	21.3
12	107725 X CA-3068 18385 1510740	1231	11	33.9	1.033	27.5	4.3				82	6.4	24.9	6.6	3.2	24.4	21.7
13	1413150 X 431242 1609305	1092	33	32.2	1.020	26.6	4.0				82	6.5	25.7	7.0	3.8	28.8	26.7
14	1510688 X 149552 1510334	1161	22	33.3	1.023	30.0	4.4				82	6.5	25.1	6.9	3.3	22.4	20.4
15	107872 X 1510707 1510379	1103	31	33.5	1.056	31.8	4.5				83	6.5	24.4	6.5	3.4	23.0	21.7
16	1510688 X 118136 137492	1096	32	34.9	1.014	28.3	4.2				81	6.5	24.6	6.6	3.0	27.3	25.0
17	KNX666 X P5490 138199	1028	42	32.8	1.056	27.2	4.0				82	7.0	24.2	6.4	3.5	25.6	22.5
18	116495 X 560092 1410022	1072	38	33.0	1.040	28.1	4.3				82	6.5	22.9	6.1	3.5	36.3	32.9
19	P145-786 X SHORTY 149916	1091	34	33.6	1.044	28.5	4.2				82	6.4	22.6	6.6	3.5	30.6	20.0
20	90203T-2074-301-7SB	1020	43	32.0	1.071	29.2	3.7				81	6.3	25.9	6.4	3.4	18.5	17.1
21	926555-3083-7SB	997	45	32.6	1.120	27.1	4.0				81	6.1	26.2	6.2	2.9	13.7	10.4
22	DPX 6414	1116	30	34.1	1.050	28.6	4.3				82	6.3	26.0	5.9	3.0	20.0	22.9
23	PM 183 RR-281	1132	24	34.7	1.074	28.4	3.9				81	6.6	27.5	6.3	3.2	18.7	18.8
24	X126514 RR	1240	9	35.0	1.006	26.6	4.4				82	6.6	24.6	6.8	3.3	27.3	28.3
25	X126661 RR	1215	15	33.5	1.066	29.6	4.0				82	7.3	25.3	6.4	3.1	22.5	21.7
26	DELTAPINE DP 2156	1075	36	33.2	1.003	26.4	4.4				82	6.5	24.6	6.4	2.4	26.0	22.9
27	DELTAPINE DP 9815 RR (2156R)	1228	12	34.6	0.989	26.0	4.4				82	6.8	26.1	7.0	2.7	28.1	23.3
28	DELTAPINE 9818 RR (2379)	1179	18	33.9	1.036	28.8	4.6				83	7.7	26.9	6.6	3.6	21.0	24.2
29	ACALA 1517-95	991	46	32.9	1.123	31.5	4.3				83	6.2	28.5	5.7	1.8	18.5	22.5
30	PAYMASTER HS 26	963	49	32.4	1.063	28.6	4.3				82	6.8	25.8	6.1	3.2	20.7	17.9
31	PAYMASTER PM 330	1117	29	33.7	1.031	28.4	4.4				82	7.0	27.0	6.7	3.4	21.8	20.4

200200119

# DELTA & PINE LAND HIGH PLAINS COTTON RESEARCH YIELD TEST RESULTS

YEAR: 2000 EXPERIMENT: AHP 401 LOCATION NUMBER: 1,3,5,7,8,9,16  
 LOCATION NAME: FINNEY (NO YLD), RSEVLT, HLE CTR, KLNDIKE, BAKER (NO YLD), SEAGRAVES, HLE CTR DRY  
 C.V.: 8.1% R-SQUARED: 0.98 L.S.D. (10%): 42 LBS

ENT NO.	VARIETY OR STRAIN	YLD LB/ AC.	RNK	LINT PER-CENT	FIBER PROPERTIES						PL. HT. IN.	VIS UAL 0-9	STR RES 0-5	EAR-LY 0-99	VERT WLT 0-99	
					LEN IN.	STREN G/TEX	MIC %	MAT	FINE MLTX	UR ELG						
32	PAYMASTER PM 2330 RR	1169	20	32.5	1.040	28.7	4.0			82	7.7	26.0	7.2	3.3	27.1	22.5
33	STONEVILLE BXXN-16	1064	39	33.4	1.046	28.2	4.1			82	6.2	24.0	6.0	2.1	25.9	16.7
34	STONEVILLE BXXN-47	978	47	34.5	1.073	27.0	4.2			81	6.3	26.6	6.2	2.2	18.1	15.8
35	286007-70056-803-901/FC2056 179372	938	51	32.6	1.091	29.4	3.9			81	5.7	26.4	5.7	3.3	14.2	16.3
36	PM330 RR-3628	1007	44	32.0	1.051	29.1	4.6			83	7.3	27.5	7.1	3.5	21.3	19.2
37	HELENA HCR 7051 (PMX 99L04)	1042	41	32.6	1.087	28.5	3.7			81	6.4	25.5	6.7	2.3	24.3	20.4
38	HELENA HCR 8061-31 (PMX 99L05)	918	52	33.4	1.100	29.2	3.5			82	6.5	24.0	5.7	2.2	16.5	12.5
39	PM 330 BG/RR	1269	6	33.9	1.037	28.0	4.0			82	6.9	25.3	7.1	3.5	24.0	22.5
40	PM2344BG/RR (X413340BR, 99V05BR)	1232	10	32.4	1.060	29.0	4.3			83	7.1	24.4	6.6	3.1	25.9	21.3
41	X105996 BG/RR-177	1132	25	35.7	1.070	29.0	4.1			81	6.8	25.8	6.3	3.0	21.2	20.8
42	X126661 BG/RR	1310	2	33.1	1.039	28.3	3.8			81	7.5	23.1	6.9	3.5	25.5	22.1
43	DELTAPINE DP 215 B (2156B)	1216	14	33.6	1.011	27.1	4.4			82	6.8	24.9	6.9	2.3	28.0	19.2
44	DELTAPINE 237B (2379)	1192	17	32.5	1.060	28.0	4.2			82	7.5	25.6	6.6	3.4	23.8	15.0
45	DELTAPINE DP 2379 BR (DPX 9C23 B/R)	1301	5	32.6	1.050	28.5	4.1			82	7.2	27.4	6.9	3.4	22.6	21.3
46	PAYMASTER PM 2326 BG/RR (98 BULK)	1211	16	32.8	1.041	29.0	4.3			83	7.3	27.0	6.8	3.3	25.2	23.3
47	PAYMASTER PM 2280 BG/RR (98BULK)	1220	13	33.0	1.076	29.3	4.0			81	6.7	25.4	6.1	2.9	27.5	25.4
48	PAYMASTER H 1218 BG/RR	1310	3	35.4	1.051	27.1	4.4			82	6.4	26.8	6.9	2.3	20.2	18.3
49	PAYMASTER H1560 BG/RR	1073	37	34.3	1.081	28.5	3.8			82	6.6	28.8	6.1	2.6	14.2	12.9
50	PM 145 BG-2866	1246	8	34.2	1.039	27.7	3.9			81	6.0	24.7	6.4	3.4	25.6	15.8
51	PM HS26 BG/RR-751	1150	23	32.6	1.020	29.9	4.2			83	7.2	27.4	7.1	3.6	21.9	17.5
52	X11446 BG/RR-170	1305	4	34.6	1.006	26.9	4.4			82	5.8	23.8	7.1	3.3	26.8	26.3
53	PM126661BR-2069	1320	1	33.4	1.037	26.7	4.0			82	8.1	24.5	6.9	3.5	24.2	19.6
NO. OF TESTS IN AVERAGE		5		6	7	7	7			7	7	7	7	7	7	4
LOCATION AVERAGES		1126		33.4	1.049	28.2	4.2			82	6.7	25.5	6.5	3.1	23.5	20.3

\*STORM RESISTANCE: SCALE 0-5 WITH 5 MOST RESISTANT.  
 \*\*VERTICILLIUM WILT SUSCEPTIBILITY: SCALE 0-99 WITH 99 MOST SUSCEPTIBLE.  
 \*\*\*EARLINESS: SCALE 0-99 WITH 99 EARLIEST.

200200119

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DELTA & PINE LAND HIGH PLAINS COTTON RESEARCH YIELD TEST RESULTS  
 YEAR: 2001 EXPERIMENT: AHP401 LOCATION NUMBERS: 1, 3, 5, 8 (FBR), 9, 10, 16  
 LOCATION NAME: FINNEY, RSVLT, HLE CTR IRRG, BAKER(FBR), DNVR CTY, STANTON, H C DRYLAND  
 C.V.: 9.43 % R-SQUARED: 0.94 L.S.D.(10%): 51 LBS

ENT NO.	XNO	VARIETY OR STRAIN	YLD LB/ AC.	RNK	LINT	FIBER PROPERTIES				PL. HT. IN.	VIS UAL 0-9	STR RES 0-5	EAR- LY 0-99	VERT WLT 0-99	
						LEN IN.	STREN G/TEX	MIC	UR ELG						
1		PAYMASTER PM 280	1022	55	0.380	1.093	29.4	4.6	83	6.7	24.6	5.6	3.4	25.0	15.4
2		PAYMASTER HS 26	1224	39	0.387	1.051	29.0	4.9	83	8.0	25.0	6.2	3.4	20.4	12.1
3		PHYTOGEN PSC 355	1291	15	0.414	1.100	28.4	5.1	84	8.6	25.8	7.9	2.0	19.8	10.0
4		STONEVILLE TEXAS 239	1251	28	0.412	1.069	27.5	4.8	83	7.8	23.6	6.8	2.5	18.9	10.0
5		STONEVILLE 474	1366	10	0.432	1.090	27.6	5.0	83	7.1	24.9	7.6	1.9	15.2	10.4
6		SUREGROW 747	1371	8	0.427	1.067	25.8	5.0	83	9.2	24.6	7.5	2.0	13.9	9.2
7		DP 8C09 [=DPX565]	1386	7	0.410	1.143	29.2	4.9	83	6.7	27.1	7.8	1.9	9.1	7.5
8		DELTAPINE DP 2379	1273	23	0.391	1.049	28.6	5.1	82	8.7	25.2	7.0	3.2	21.1	11.3
9	00V14	116495 X 560092 1410022	1199	42	0.393	1.016	27.7	4.7	82	7.4	21.6	6.3	3.5	42.2	22.9
10	00V10	1510688 X 149552 1510334	1195	46	0.392	1.036	30.6	4.9	84	7.2	23.9	7.2	3.2	23.9	10.4
11	00V08	107725 X CA-3068 18385 1510740	1413	4	0.412	1.031	26.9	5.0	83	7.6	24.0	6.9	3.2	24.7	11.7
12	00V24	403025 X 403049 177951	1288	17	0.392	1.056	27.0	4.7	82	6.3	24.6	7.6	3.0	26.8	15.0
13	00V26	107725 X 431242 137659 179797	1198	44	0.384	1.047	28.5	5.2	83	6.4	22.9	6.4	3.6	29.9	15.8
14	01V79BR	PM126661BR-2069	1199	43	0.382	1.040	26.0	4.4	82	10.0	22.6	6.7	3.7	23.9	8.8
15	00V47	PHS26-02 X 221144 588478	1286	18	0.409	1.031	27.0	5.2	82	7.2	23.0	6.4	3.3	35.4	16.7
16	01V07	REBA P-288 X 892-01 588720	1474	2	0.421	1.086	28.0	4.8	83	6.9	21.7	6.8	2.7	28.4	12.9
17	01V26	X1510740-07 589772	1444	3	0.409	1.030	27.4	5.2	82	7.6	23.6	7.4	3.4	25.3	9.2
18	00V48	X1510740-21 589776	1489	1	0.424	1.030	26.0	5.1	82	7.6	23.9	7.1	3.2	26.8	12.5
19	00V33	HS26 X SNO126 2161023	1291	16	0.399	1.057	28.8	5.4	83	6.4	25.6	7.1	2.3	18.3	10.4
20	00V04	105711 * LA 861885 X 106091 * 221144 2280025	1275	22	0.403	1.087	30.4	4.8	83	6.2	23.7	6.0	2.2	27.4	16.3
21	00V35	REBA P-288 X 118000 2280084	1283	19	0.395	1.103	29.2	4.8	83	6.4	25.6	7.4	2.5	18.2	9.6
22	00V32	DP 2156 X SUREGROW 501 2280114	1406	5	0.419	1.104	28.5	4.8	84	7.3	27.6	7.8	1.2	16.5	8.8
23	00V41	DP 2156 X SUREGROW 501 2280120	1228	35	0.447	1.066	26.3	4.8	83	7.3	25.7	7.4	2.1	24.7	12.9
24	00V40	DP 5409 X DC81/AC90/65 2280139	1228	36	0.385	1.071	30.2	4.9	83	7.2	26.0	6.7	1.8	24.6	12.1
25	00V02	REBA P-288 X 118000 2280229	1298	14	0.395	1.067	29.2	5.2	83	6.3	25.8	7.1	1.8	21.7	9.2
26	00V03	HS 200 X DC81/AC90/65 2280269	1249	29	0.401	1.110	29.4	4.6	83	7.1	22.4	7.3	2.7	24.0	10.4
27	00V44	HS 26 X SUREGROW 501 2280302	1323	12	0.383	1.136	29.5	4.9	84	8.3	27.5	7.8	1.6	13.4	11.3
28	00V38	P892 X 136180 2280515	1322	13	0.398	1.079	29.1	4.8	83	7.5	26.3	6.2	3.1	16.8	7.1
29		PAYMASTER PM 2326 RR	1228	37	0.390	1.057	29.1	5.0	83	7.8	24.6	6.4	3.3	23.1	9.6
30		PAYMASTER PM 2200 RR	1077	54	0.384	1.063	29.2	4.9	83	7.0	26.4	6.1	3.2	20.8	10.4
31		DELTAPINE 9818 RR (2379)	1172	49	0.395	1.039	28.3	5.1	83	9.3	25.1	6.6	3.4	18.9	11.7
32		DELTAPINE DP 9815 RR (2156R)	1207	40	0.394	0.980	25.2	5.1	82	8.5	25.0	7.4	2.1	29.7	11.7

DELTA & PINE LAND HIGH PLAINS COTTON RESEARCH YIELD TEST RESULTS  
 YEAR: 2001 EXPERIMENT: AHP401 LOCATION NUMBERS: 1, 3, 5, 8 (FBR), 9, 10, 16  
 LOCATION NAME: FINNEY, RSVLT, HLE CTR IRRG, BAKER(FBR), DNVR CTY, STANTON, H C DRYLAND  
 C.V.: 9.43 % R-SQUARED: 0.94 L.S.D.(10%): 51 LBS

ENT NO.	XNO	VARIETY OR STRAIN	YLD LB/AC.	RNK	LINT PER-CENT	FIBER PROPERTIES				PL. HT. IN.	VIS UAL	STR RES	EAR-LY	VERT WLT
						LEN IN.	STREN G/TEX	MIC	UR					
33	01V39R	PM11446[1445]-98BC3F3-1042	1151	51	0.386	1.039	28.3	4.9	83	7.1	23.0	6.8	3.0	30.8
34	00V05R	PM 2167 RR	1264	27	0.415	1.007	27.7	5.0	82	8.1	22.3	7.1	3.6	33.3
35	00V06R	PM 2266 RR	1240	31	0.390	1.056	28.4	4.8	83	8.0	23.5	6.2	3.1	24.4
36		STONEVILLE ST 2454R	1196	45	0.412	1.053	27.9	4.8	83	7.8	23.5	6.3	2.4	21.9
37		ALL-TEX ATLAS RR	1163	50	0.386	1.027	27.2	4.8	82	8.0	26.1	6.1	3.3	21.7
38		ALL-TEX XPRESS RR	913	56	0.341	1.097	30.3	4.4	84	6.3	25.1	5.4	3.3	26.7
39		PAYMASTER PM 2326 BG/RR	1202	41	0.387	1.021	28.2	4.7	82	8.9	24.9	6.3	3.4	23.9
40		PAYMASTER PM 2280 BG/RR	1135	53	0.382	1.083	29.1	4.7	82	7.0	24.6	6.2	3.0	26.4
41		PAYMASTER H 1218 BG/RR	1346	11	0.419	1.066	26.9	5.3	83	7.4	24.6	7.4	2.2	20.0
42	99V05BR	PM2344BG/RR (X413340BR, 99V05BR)	1182	48	0.379	1.057	28.6	4.9	83	7.7	23.6	6.4	3.2	26.1
43	99V02BR	X105996 BG/RR-177	1282	20	0.427	1.084	29.3	4.8	82	7.1	23.8	6.4	2.5	17.9
44	00V54B	PM 145 BG-2866	1266	26	0.398	1.036	27.6	4.3	81	7.2	24.3	6.7	3.2	27.5
45	00V56BR	X11446 BG/RR-170	1392	6	0.403	1.037	28.4	4.8	83	6.9	22.3	7.6	3.4	24.4
46	01V40BR	PM11446[531][1445]-98BC3F3-133	1228	38	0.393	1.044	28.0	4.8	83	6.7	23.4	11.2	3.4	26.7
47	01V57BR	PM280[531][1445]-98BC3F3-0054	1269	24	0.396	1.076	28.5	5.1	83	7.5	25.7	6.4	3.3	23.9
48	01V59BR	PM280[531][1445]-98BC3F3-1472	1150	52	0.387	1.071	29.0	4.9	83	7.3	25.7	7.0	3.0	18.1
49	01V29BR	PM HS200 BG/RR-21	1231	33	0.408	1.047	27.2	4.6	82	8.2	24.3	7.0	2.7	26.4
50	00V06BR	X126661 BG/RR	1248	30	0.381	1.054	27.1	4.5	82	8.7	22.6	6.4	3.4	27.5
51	00H03	107872 X 1414078 1161478	1231	34	0.408	1.041	27.1	4.8	82	7.0	22.8	6.8	2.7	28.8
52	00H04	CA-3068*P147 X 1510012*PD073 1160849	1185	47	0.401	1.020	27.9	4.9	83	7.8	23.5	6.7	3.4	31.0
53	00H29	DPX0159/DC81/AC90.-65/3/DP5404 [941104-6007-7SB]	1268	25	0.413	1.069	29.0	5.1	83	7.5	25.1	7.4	2.8	23.1
54		FIBERMAX 989 RR	1369	9	0.424	1.091	30.4	4.7	82	6.2	25.2	7.5	2.1	6.9
55	01V78	X1511583 (2000 BLK:08,12,21,24,27,29)	1276	21	0.396	1.029	29.6	5.0	83	6.8	24.9	6.7	3.3	26.9
56	01V32R	PM105996[1445]-98BC3F3-839	1234	32	0.402	0.989	29.2	5.3	82	7.3	25.3	6.3	3.8	28.9
NO. OF TESTS IN AVERAGE			6	6	6	7	7	7	7	7	6	6	6	4
EXPERIMENT AVERAGES			1257		0.40	1.059	28.3	4.9	83	7.5	24.5	6.9	2.9	23.6

\*STORM RESISTANCE: SCALE 0-5 WITH 5 MOST RESISTANT.  
 \*\*VERTICILLIUM WILT SUSCEPTIBILITY: SCALE 0-99 WITH 99 MOST SUSCEPTIBLE.  
 \*\*\*EARLINESS: SCALE 0-99 WITH 99 EARLIEST.

200200119

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DELTA & PINE LAND HIGH PLAINS COTTON RESEARCH  
ACROSS YEARS PERFORMANCE SUMMARY OF VARIETIES AND STRAINS

REGION: HIGH PLAINS

NO. OF YEARS: 2

YEARS: 2000-2001

ENT #	XNO	VARIETY OR STRAIN	YLD AHP	RNK AHP	YLD NHP	RNK NHP	YLD SHP	RNK SHP	LINT PER-CENT	FIBER PROPERTIES				PL. HT. IN.	VIS UAL 0-9	STR RES 0-5	EARLY 0-99	VERT WLT 0-99	
										LEN IN.	STREN GTEX	MIC UR	ELG						
1		PAYMASTER PM 280	987	24	922	24	1041	24	34.8	1.091	29.6	4.4	83	6.5	25.0	5.6	3.3	25.5	20.2
2		PAYMASTER PM 2326 RR	1182	16	1136	14	1220	19	36.3	1.056	29.0	4.7	83	7.3	25.8	6.4	3.4	24.6	17.5
3		PAYMASTER PM 2200 RR	1079	23	1057	22	1097	23	35.7	1.061	28.7	4.5	82	6.8	26.5	5.8	3.2	22.6	16.9
4		DELTAPINE DP 2379	1206	12	1190	7	1220	20	36.2	1.045	28.2	4.9	83	7.9	25.4	6.7	3.2	21.2	14.4
5		SUREGROW 747	1283	4	1182	8	1368	5	38.7	1.073	25.9	4.7	83	8.2	24.8	7.0	2.0	16.7	10.6
6		DP 8C09 [=DPX565]	1195	15	1071	21	1299	8	37.2	1.118	28.8	4.4	83	6.5	27.4	6.9	1.9	11.8	8.3
7		STONEVILLE TEXAS 239	1163	20	1088	19	1225	17	37.6	1.058	27.4	4.5	83	7.2	24.2	6.4	2.5	19.4	11.5
8	00V08	107725 X CA-3068 18385 1510740	1330	2	1232	3	1412	1	37.6	1.032	27.2	4.6	82	7.0	24.5	6.7	3.2	24.6	16.7
9	00V10	1510688 X 149552 1510334	1180	17	1100	16	1246	15	36.3	1.029	30.3	4.6	83	6.8	24.6	7.0	3.3	23.1	15.4
10	00V14	116495 X 560092 1410022	1141	21	1045	23	1222	18	36.2	1.028	27.9	4.5	82	7.0	22.3	6.2	3.5	39.1	27.9
11	00V05R	PM 2167 RR	1253	8	1173	9	1320	7	38.3	1.006	27.1	4.7	82	7.4	23.5	6.9	3.4	30.1	20.4
12	00V06R	PM 2266 RR	1229	9	1201	5	1251	14	36.2	1.061	29.0	4.4	83	7.6	24.5	6.3	3.1	23.4	16.7
13		DELTAPINE DP 9815 RR (2156R)	1216	10	1151	10	1272	10	37.0	0.984	25.6	4.8	82	7.6	25.6	7.2	2.4	28.8	17.5
14		DELTAPINE 9818 RR (2379)	1175	18	1123	15	1219	21	36.7	1.037	28.5	4.8	83	8.5	26.1	6.6	3.5	20.0	17.9
15		PAYMASTER HS 26	1105	22	1082	20	1124	22	35.5	1.057	28.8	4.6	83	7.4	25.4	6.2	3.3	20.6	15.0
16	99V05BR	PM 2344 BG/RR	1205	14	1148	11	1252	13	35.1	1.059	28.8	4.6	83	7.4	24.0	6.5	3.2	26.0	17.5
17	99V02BR	X105996 BG/RR-177	1214	11	1145	12	1271	11	39.2	1.077	29.2	4.5	82	7.0	24.8	6.3	2.8	19.7	17.1
18	00V06BR	X126661BG/RR	1276	5	1195	6	1344	6	35.6	1.046	27.7	4.2	82	8.1	22.9	6.6	3.5	26.4	17.3
19		PAYMASTER PM 2326 BG/RR	1206	13	1144	13	1258	12	35.7	1.031	28.6	4.5	83	8.1	26.0	6.6	3.4	24.6	18.5
20		PAYMASTER PM 2280 BG/RR	1174	19	1091	18	1243	16	35.6	1.079	29.2	4.4	82	6.9	25.1	6.1	2.9	27.0	20.2
21		PAYMASTER H 1218 BG/RR	1330	3	1240	2	1405	2	38.6	1.059	27.0	4.8	83	6.9	25.8	7.1	2.2	20.1	16.0
22	00V54B	PM 145 BG-2866	1257	6	1095	17	1392	4	37.0	1.037	27.7	4.1	81	6.6	24.5	6.5	3.3	26.5	14.8
23	00V56BR	X11446 BG/RR-170	1352	1	1301	1	1395	3	37.4	1.021	27.6	4.6	82	6.4	23.1	7.3	3.3	25.7	19.2
24	01V79BR	PM126661BR-2069	1254	7	1221	4	1282	9	35.8	1.039	26.3	4.2	82	9.0	23.6	6.8	3.6	24.1	14.2
NO. OF TESTS IN AVERAGE			11	11	5	5	6	6	12	14	14	14	14	14	13	13	13	13	8

\*STORM RESISTANCE: SCALE 0-5 WITH 5 MOST RESISTANT.

\*\*VERTICILLIUM WILT SUSCEPTIBILITY: SCALE 0-99 WITH 99 MOST SUSCEPTIBLE.

\*\*\*EARLINESS: SCALE 0-99 WITH 99 EARLIEST.

ONE TEST CORRESPONDS TO ONE REPLICATED YIELD TRIAL (3 REPS).

200200119

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S)  D&PL Technology Holding Corp.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER PMX 413340BR DPX 99V05BR	3. VARIETY NAME  PM 2344 BG/RR
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  P.O. Box 157 Scott, MS 38772	5. TELEPHONE (Include area code)  662.742.4141	6. FAX (Include area code)  662.742.3182
7. PVPO NUMBER  200200119		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

PM 2344 BG/RR contains two proprietary genes, patented by the Monsanto Company and licensed to D&PL. One gene encodes a protein providing resistance to the herbicide glyphosate, and the other encodes an insect toxin.

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.